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and its uses





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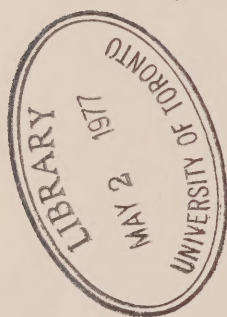
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THE CONSUMER PRICE INDEX AND ITS USES

PRESENTED TO  
THE ONTARIO SEPARATE SCHOOL TRUSTEES' ASSOCIATION  
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Joseph Morris, President of the Canadian Labour Congress, believes this year's number one problem will be the struggle for wage increases to match or exceed rising living costs.

He said "toward the end of 1974, unions did, to some extent, get raises that equalled the rise in the price index, but they were not enough to maintain purchasing power if the index keeps on rising. Workers will have no way to hold their relative position unless some kind of adjustment clause is built into contracts".

My talk will outline this price index alluded to by Mr. Morris, and how it is being used as an escalator in various contracts.

The Consumer Price Index is the most talked about index published by Statistics Canada. It is said that a wiggle upward or downward in this monthly statistic receives widespread publicity and touches off a great deal of public debate.




With such heavy dependence on this price statistic, it is imperative that we have a better understanding of it.

When we talk of an index number, we mean a number indicating the relative level of something today (e.g. prices or wages) compared with a base period. A price index measures the percentage change in price that has occurred since a designated reference period.

To develop a price index, we take the price in the base period and give it a value of "100". This allows us to express the subsequent price as an "index number", indicating the percentage change from the base value of 100.

Index values cannot be compared as though they were prices. If one item has the highest index, that does not mean it has the highest price. The size of an index indicates how fast the price is changing, but not how much the price is.



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A price index then measures the change in price that has occurred over time by comparing the current price to the base period price, and expressing the change as an index number which can be directly compared to the base period index number of "100". It shows the current price as a percentage of the base period price. If the current price index is greater than 100, it means the price has increased since the base period; if the current index is less than 100, it means the price has decreased since the base period.

We can have a price index for a single item, for instance butter, or we can have a price index for a group of items. The index for a group or selection of items is called a "composite or aggregate" index because it is composed of different items.

This type of index assigns equal importance to each component. This severely limits the usefulness of the index, because the equal importance implied for each item is usually unrelated to its economic significance. For example, what significance would there be in the combination of a pound of beef, a quart of milk, a dozen eggs, an ounce of perfume and one hundred pounds of fertilizer? The number of one hundred pound bags



of fertilizer sold would have been only a fraction of the quarts of milk that were sold. By considering one unit of each, milk does not receive the importance it deserves. The movement of this type of index is controlled by those items selling at a high unit price. Of the above commodities, fertilizer is the most expensive item per unit. It is possible that a falling price for this item could offset rising prices in the other four items combined. The composite index would fall because the sum of the four price increases was less than the decrease in the price of fertilizer.

It might appear the bias toward high unit priced items could be removed by introducing a common weight basis for all items, but if a common unit of measurement is used when pricing an item, such as how much it weighs, precious items will tend to dominate the simple composite index, again regardless of their economic importance.

To overcome this problem, a statistical technique called "weighting" can be used to measure the relative importance of various items which are to be compared and which make up an index. For example, the effect





an item has on the family food budget is not only determined by a price increase, but also by the quantity of that item required or consumed. If the price of black pepper were to double it would not have as significant an effect on most people's family food budget as would a 5% increase in the price of bread. Therefore, black pepper would carry a low weight in the budget versus a significantly higher weight for bread. Each item included in a composite or aggregate index has a weight which represents its relative importance in the index budget. To calculate the respective weights of items, we need to consider quantity or volume as well as price.

In 1910, the first of a series of Canadian index numbers of retail prices was published, covering the period 1900 to 1910. Since that time, Statistics Canada has continuously carried out improvements and revisions of retail price indexes to conform with the changing buying patterns of the Canadian people. At the same time, there has been a constantly changing variety of goods and services available



to the consumer. Many products have dissappeared from the market, while many more new products have been introduced. When there appears to have been a significant change in the variety of goods and services that are purchased, it becomes necessary to change the basis of calculating the price indexes.

The Consumer Price Index (C.P.I.) as we know it today reflects the seventh revision of weights and content since it was first introduced early in the century. Specifically, the C.P.I. measures the percentage change through time in the cost of purchasing a constant basket, or selection, of goods and services representing the purchases made by a particular group of families in a specified time period. The basket of goods and services consists of about three hundred different items, ranging from the price of haircuts to the price of automobiles. As you are probably well aware, the C.P.I. is calculated and released monthly. For example, the February 1975 Consumer Price Index released in mid March indicated that the cost of the basket of goods and services was 78% higher than in 1961.





I would now like to outline some of the details of the Consumer Price Index.

It was mentioned (before) that in the construction of any index measuring change through time, two reference periods are required. One is the "time base" at which the index equals 100. It is from the time base that the index measures the percentage change in prices.

A practical consideration in the selection of a time base is that it should conform, in so far as possible, with the time base for other national and international statistical series. This was a prime reason for the selection of the current time base of 1961 for the Consumer Price Index.

The second reference period is the "weight base". This is the time period when each of the various items that make up an index is evaluated and given a specific weight which determines its importance in the total index.

In order to arrive at the "weight base" for the Consumer Price Index, it was necessary to find out how much was spent on the various items that constitute normal day-to-day living. This includes expenditures on things such as food, clothing, homes, automobiles, house furnishings, fuel, drugs, fees to dentists, public utility services, and so on.



The 1967 survey of urban family expenditure was used for this purpose. In that year, over 2,000 families supplied records of their annual expenditure on all items. Further information on food expenditure was obtained, monthly, from approximately 13,000 families during 1969.

In selecting the C.P.I. target group from amongst the total sample, the objective was to secure wide representation of urban families with reasonable similarity in spending patterns among various groupings of family types and incomes.

Accordingly, the C.P.I. population reference group in Canada, used in the most recent revision, had the following characteristics:

1. Families ranged in size from two to six persons.
2. They had annual incomes in 1967 between \$4,000 and \$12,000.
3. They all lived in urban areas that had over 30,000 population.





When a new expenditure survey is undertaken, these characteristics are revised to continue representing families of medium size and income.

It was from the records of these families that the current "basket" of goods and services was developed along with the appropriate weights for each item in the basket. The weight assigned to each item represents the importance of the particular item relative to the entire basket of items of consumption expenditures, as determined by the amount of money the average family spends on it.

The cities surveyed in 1967 were St. John's, Halifax, Quebec, Montreal, Ottawa, Toronto, Winnipeg, Regina, Saskatoon, Edmonton and Vancouver. Separate monthly Consumer Price Indexes are produced for these and a few additional cities, and the aggregate 1967 expenditure patterns for the eleven large cities are taken to be representative of all forty-eight centres with over 30,000 in population as of 1966.



Summing up, the Index is based on expenditure patterns of families of two to six persons, with incomes between \$4,000 and \$12,000 and who live in a Canadian city with over 30,000 population.

There are seven major categories of items included in the C.P.I. and each category has a weight assigned to it as of 1967. These categories and weights are as follows:

Food	24.80
Housing	31.39
Clothing	11.27
Transportation	15.18
Health and Personal Care	4.51
Recreation and Education and Reading	6.89
Tobacco and Alcohol	5.96
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Each of the 300 odd items that are priced, has a weight and is grouped in one of these seven categories.

The prices used in calculating the Index are retail prices paid by final purchasers and include all sales and excise taxes.

Prices are collected from a variety of sources that are representative of those used by families in the sample, with the number of price quotations for an item varying widely, depending on its nature. In any one month, over 40,000 individual food prices are used in the national index on the basis of nearly one hundred items priced in up to twenty stores in each of thirty-four cities. On the other hand, only a single price in each city is required for such items as street car and bus fares or automobile licences. Although most items are priced monthly, those subject to less volatile price behaviour are priced nine times a year, newspapers twice yearly, and property taxes annually.



The bulk of the price information is collected by pricing officers in regional offices of Statistics Canada. These officers are engaged continuously in pricing assignments in retail and other outlets for the full range of goods and services included in the Consumer Price Index. They are assisted by part-time agents, many of whom are housewives.

In addition, rent data are obtained through monthly surveys of some 8,000 rented households in urban areas.

Prices collected for the index relate to narrowly specified varieties of goods and services at the individual item level. The same specification is used in successive time periods to ensure prices used in the Index are comparable from period to period, i.e. they refer to the same quantity and quality of consumer goods and services. In order that the Index represents price changes only, it is necessary to identify and evaluate quality or value changes in the items if, and when, they occur. For example, if the price of an appliance increased by \$15.00, but the new model included a safety switch whereas the old model did not, it would be incorrect to say the cost of the appliance had increased by \$15.00, because you would



be getting more "value" in the new price. It would be necessary to deduct the cost of the added feature from the new price level to arrive at any "real" price change. Similarly, if the price of canned vegetables is held constant, but the volume is decreased from, say, 14 ounces to 12 ounces, the difference is recorded as a price increase.

Now I would like to turn to some applications of the Consumer Price Index.

The persistent rise in prices through the past decade, and the especially sharp upsurge of the past two years, have directed more and more attention to ways of cushioning inflation's damaging effects and of reducing the risks associated with future variations in the rate of inflation. Much of this attention has focused on the concept of indexing, that is, on explicit arrangements to adjust various kinds of contractual payments or other sorts of financial structures for changes in a price index. Pensions, family allowances, union contracts and even alimony payments are "pegged" to the Consumer Price Index.

The terms, Consumer Price Index and Cost of Living Index are used interchangeably when, in fact, they are not necessarily identical. As has been pointed out, the





Consumer Price Index measures the percentage change through time in the cost of purchasing a constant "basket" of goods and services representing the purchases made by a particular population group in a specific time period. The "basket" is an unchanging or equivalent quantity and quality of goods and services.

A cost of living index (of which none exist anywhere in the world) would take account of voluntary and forced substitutions of consumer goods and services in response to price changes. For example, let us assume you purchase a sirloin tip roast every week for Sunday dinner. When the price of beef rose drastically you may have decided to purchase a cheaper cut of beef or to switch to poultry. What you have done is substituted a choice cut for a lesser quality cut in order to offset the higher price. Now, in the C.P.I., if we are pricing the sirloin tip roast each week, we do not substitute, we continue pricing the same cut of meat. To the extent that you have purchased a cheaper roast, you may not have incurred an increase in your personal cost of living because you substituted a lower quality item. This is not to say lower prices are translated into a lower standard of living for a person. People respond to higher prices in many ways. They postpone purchases,



buy more carefully at sales, only telephone long distance on weekends, or shop for equal quality alternatives such as powdered milk for fluid milk. People can, and do, absorb part of the price by modifying their spending patterns, without necessarily altering their lifestyle.

As the C.P.I. only measures prices, there are many other non-price factors, such as additions to family size and changes in the income tax structure that it omits. A true cost of living index would attempt to measure the impact of all such non-price factors. In summary, the C.P.I. measures price changes, whereas a cost of living index would measure the effect of price change.

Official use of price indexes has become quite commonplace, the aim being to place on an orderly basis the compensation for rising prices which inevitably would otherwise be provided in an erratic and intermittent fashion.

Persisting inflation has understandably led to a noticeable increase in the number of private and public contracts using escalator clauses.



Some of the important decisions to index taken by the Government of Canada reflect a straightforward desire to protect the real value of payments to those who may be unable to adapt to a situation where the value of money diminishes rapidly and unpredictably. The full adjustments for changes in the Consumer Price Index that are now made in the Old Age Security Pension, the Guaranteed Income Supplement, War Veterans' Pensions and Allowances and the Family Allowances are in accord with this line of thinking. Roughly ninety percent of all federal transfer payments to individuals are explicitly indexed.

In the private market place, a wide range of devices has evolved in the attempt to offset the effects of inflation. Pension plans, engineering and construction contracts, long term leases of commercial and industrial property and labour-management negotiations are the more prominent areas making use of indexing devices. I would like to take a closer look at cost of living contract clauses, as these are of more concern to us here today.





There are a variety of cost of living clauses.(COLA), most providing for a specific formula to determine how and when an increase is to be granted. Many of the clauses provide for an allowance to be paid over and above the regular wage rate, based on the formula, and the allowance does not form part of the wage rate. In these instances, the cost of living payment is referred to as a "floating" allowance. When the allowance, or a portion of the allowance, is added to the wage rate, it is referred to as a "fold-in" and increases the employee's basic wage rate by the amount of the allowance which is folded in. In these cases, it is obvious the employee received the added amount for each hour worked, whereas not all COLA payments which are permitted to "float" are calculated on overtime hours.

The vast majority of COLA provisions utilize, as the basis of measurement, the Consumer Price Index.

The decision as to which index to use (i.e. Canada or one of the fourteen Regional) is not unanimous. In a study of COLA clauses done by the Federal Department of Labour of bargaining units of two hundred members or more early in 1974, the Canada index was more popular, but a Financial Times' Survey of Business Opinion reported



in June 1974, that two out of three executives favoured the Regional Consumer Price Index.

The formula for calculating increases in the allowance may range from a cents-per-hour increase per point increase in the C.P.I., to a percentage increase in allowance based upon a percentage increase in the index. From the Labour Canada study of 233 agreements containing a cost of living allowance clause, 190 (81.5%) were found to be based on a cents-per-hour increase per point increase in the index. Much less common were contracts which provided for a COLA percentage increase based upon a percentage increase in the C.P.I.

It is interesting to note that in spite of the percentage method being much less popular, it does seem to provide better protection for the worker. The cents-per-hour method restores purchasing power that was eroded due to inflation only in exceptional cases, namely only when the percentage increase in wages that is obtained through a flat cents-per-hour rise corresponds exactly with the percentage increase in the C.P.I. For example, assume that the COLA provides for a one cent per hour wage increase for each four tenths of a point increase in the C.P.I. Assume further that the annual inflation amounts to ten percent.



Taking the February 1975 level of the C.P.I. of 178, a ten percent increase would raise the C.P.I. to 195.8 or by 17.8 points in February 1976. This will produce a wage increase of 44.5 cents per hour. For a worker earning \$4.00 per hour, this increase amounts to 11.1 percent. For a worker earning \$7.00 it amounts to only 6.4 percent.

While this type of agreement tends to narrow wage differentials, it does not afford the same type of protection from inflation for workers with different wage rates. Another factor that influences the degree of protection afforded by this type of contract is the frequency of adjustment. Obviously, under periods of accelerating inflation, the protection is adjusted during the term of the contract.

The flat cents-per-point COLA has another possible drawback. Since it is specified in terms of C.P.I. points, the size of the wage increase can be significantly affected when the C.P.I. is being rebased. Again this point can be illustrated by a simple example. Assume that a COLA was signed using as its starting point the C.P.I. for February 1975, 178.0 and that wages are supposed to rise by one cent per hour for each four tenths of a point increase in the C.P.I. A ten percent increase would raise the C.P.I.





by 17.8 points to 195.8, producing an increase of 44.5 cents per hour. Assume the C.P.I. is rebased from 1961 = 100 to February 1975 = 100. The rate of inflation is not changed thereby, but a 10 percent increase in the C.P.I. would now produce a wage increase of only \$.25. Contracts of this type should, therefore, make explicit provisions for this kind of change in the base year of the C.P.I. (I should note that Statistics Canada usually continues to provide the C.P.I. on the old basis for a number of years after rebasing. Nevertheless, while the old and the newly-based series display identical percentage changes, the C.P.I. based on the new base at that point becomes the official C.P.I.).

Most of these drawbacks can be avoided by using a different type of COLA, namely the percentage method. This simply specifies that over the term of the contract, wages are increased by the same percentage as the C.P.I. This method has a number of advantages, especially if it is used as a fold-in agreement. It affords full protection from C.P.I. changes for all workers, regardless of wage or salary levels. It does not change wage differentials, as is the case with the cents-per-point method described above.



This does not mean that wage differentials would have to stay necessarily the same. Rather, this method merely assures that wage differentials are not distorted through the phase of collective agreement that has to do with cost of living adjustments. It thus facilitates the explicit and separate treatment of problems in the collective bargaining process that are not a function of the rate of inflation such as "real" wage increases (so-called productivity increases), changes in relative wage differentials, "catch-up" provisions, etc.

I would like to mention a few facts taken from the study done by Labour Canada which will summarize the most common characteristics of the 190 contracts which provide a cents-per-hour COLA increase based upon a per point increase in the C.P.I.

1. The majority (124) of the agreements provide for quarterly adjustments.
2. The most common range of compensation provided is \$.01 per every 4/10 point increase in the C.P.I. to \$.01 per 6/10 point increase.



3. Ninety-one agreements provide for a maximum payment, and, of these, sixty-five provide that the maximum be applied annually.
4. The maximum payment ranges from \$.03 to \$.30 per hour per contract year.
5. Thirty-nine agreements provide a minimum or guaranteed COLA, and in twenty-nine of these, the minimum or guarantee is applied on an annual basis.
6. Fifty-seven agreements contain a provision that the C.P.I. must increase by a minimum amount before the COLA increase formula is applied.

For both sides, a COLA clause enables a longer contract to retain some of the flexibility of a shorter agreement. Some employers have been concerned about uncertainties over the precise future level of their money costs created by COLA's, but, if price rises are unexpectedly sharp, as has been the case recently, many employers may in any case be obliged to introduce unplanned wage increases or else open up existing labour contracts for renegotiation.





At the beginning of 1974, almost ten percent of the collective agreements recorded by the Department of Labour contained cost of living allowances. Although no statistics are available for the year end, a recent article in the Financial Times estimates there has been a 65% increase in the number of collective agreements that contain cost of living adjustment features.

More of a burden than ever is being put on the Consumer Price Index as growing numbers of Canadians match their wages to it, and offset their pensions and tax payments against it. It is very easy to rely on a mechanical device such as the C.P.I. in bargaining sessions without really knowing the suitability of the device.

When using the existing C.P.I. as a general measure of inflation, several shortcomings must be kept in mind. Quite often, what is wrong with the C.P.I. is the use that is made of it as a cost of living index, which it is not.



A frequent misunderstanding is the notion of the current annual rate of increase in the C.P.I. I am sure that every instance of contract negotiation between labour and management is faced with this concept. There are so many different ways of calculating various rate-of-change measures of a given time series that anyone but a statistical expert is left bewildered by the meaning of the various rates. This problem is of particular concern at this time, in view of the publication of the C.P.I. growth rates based on seasonally adjusted material. Publication of the adjusted rate, as you may know, was started February 7, 1975 on a regular basis with the January 1975 index.

If you are faced with assessing the annual rate of inflation (as measured by the C.P.I.) would you know the validity of the data put before you?

Let me illustrate the possible ways of calculating the current annual rate of increase in the C.P.I. by using the most recent data for February 1975.



1. Using unadjusted data, you can calculate the month-to-month growth rate (i.e. from January to February) and raise it to the annual rate. 9.9%

This would be the current annual rate if it were not for the distortions introduced by seasonal and irregular factors. These factors are also expanded so that the resulting "annual rate" derived in this particular fashion would be quite unreliable.

2. You can measure the same month-to-month change using seasonally adjusted data and raise it to an annual rate. 8.7% The resulting annual rate is still too erratic to be a useful indicator due to the presence of a random factor.
3. The most often used rate is that obtained by comparing the current month's C.P.I. with one year earlier (i.e. February 1975 to February 1974) 11.8%. This is not the current annual rate of inflation because it does not adequately take into account what happened in the most recent period. When price changes are accelerating, this particular measure tends to understate the current rate of inflation. When price changes decelerate, it exaggerates what is currently happening.



4. You can compare the year ending this month with the year ending twelve months ago 11.3%. Obviously, this lagged response in the annual rate would be even stronger than the lag in the monthly rate expressed in the previous example.
5. In an attempt to reduce or diminish the effects of irregular distortions you can calculate a growth rate using seasonally adjusted data, compounded over the preceeding three months, and raised to an annual rate 9.5% . Since it is based on seasonally adjusted data and since the effect of irregular distortions is reduced by taking a three month period, this is the measure which reflects the underlying current trend of the C.P.I.

The three month span for averaging purposes is a reasonable compromise. The period is long enough to reduce the effects of irregular data, yet short enough to be representative of the current trend in the C.P.I.

Therefore, to answer the question "What is the current annual rate of change in the C.P.I.", the appropriate measure to use is the rate based on seasonally adjusted data, preferably on the three month compounded rate.





Another popular activity is to measure the purchasing power of wages.

Changing consumer price levels affects the amount of consumer goods and services which a dollar will buy, and average wages, insofar as they are spent on such items, will, of course, be affected in the same way. A wage measurement which takes the change of consumer prices into account, can be calculated by reducing actual average wages by the percentage rise in consumer price levels, or increasing them by the amount price levels fell. Wages thus adjusted may be used to indicate the comparative purchasing powers of average earnings if consumer price levels and consumption patterns had remained constant.

To illustrate; one is able to obtain data on median salaries of teachers in Canada on an annual basis say from 1961 to 1972 and find that the median has changed from \$4,247 to \$8,525. In the same interval the C.P.I. advanced from 100 to 139.8. Because of the 39.8% rise in consumer prices, \$1.00 will not buy as much in 1972 as it would in 1961. On the other hand, the 100% rise from \$4,247 to \$8,525 will overstate the increase which has occurred in the purchasing power of the median salary. This overstatement can be removed by reducing the figure of \$8,525 by the amount of the consumer price increase.



The adjusted median is \$6,098 ( $\$8,525/139.8 \times 100$ ), which may be referred to as the median salary for the 1972 expressed in 1961 dollars.

There are several problems inherent in this type of calculation which should be noted.

Variations in median salary do not necessarily indicate variations in the salary schedules on which teachers are being paid. Since salaries are based on both years of training and years of teaching experience, changes in the teaching force reflecting either of these two factors could conceivably cause an increase in the median salary while the salary scale remained unchanged.

Individual earnings will differ significantly from the group average depending upon size of school board, geographical location or sex of the employee. Moreover, individual spending habits differ widely, but the Consumer Price Index which is used to adjust the salaries refers only to the average consumption pattern of a particular population group. Group spending patterns change over periods of time. To the extent that this occurs, the wage data adjusted by the C.P.I. will gradually be rendered less valid. Furthermore, some part of income may be saved, and it should be borne in mind that it is not appropriate



to reduce savings to a constant dollar basis by using an index which reflects consumption patterns.

It should also be kept in mind that measures of change in real earnings calculated from averages of gross earnings may differ from changes in the purchasing power of "take home" pay, due to such factors as changes in personal income tax and pay deductions for such things as social insurance and pension plans.

Persistent confusion with the housing component of the C.P.I. is evident from the often misdirected criticism of the element.

It was mentioned that the C.P.I. is divided into seven major groups and one of these, housing, accounts for almost one third of the total weight.

A look at this subcomponent of the overall index reveals that between 1971 and 1974 it increased by about 22 percent. A recent report published by Statistics Canada showed that over the three year interval the price of new housing has increased by between 50 and 80 percent in the major urban centres.



As you might imagine this apparent discrepancy caused a rash of articles to appear in the press casting doubts on the validity of the C.P.I. and its ability to measure consumer housing costs. The natural extension to this is that labour leaders demand compensation for this "new found" injustice. It is true Statistics Canada publishes both of these indexes, but, as carefully noted in the technical descriptions provided with the data releases, each refers to a different aspect of economic life.

The housing component in the C.P.I. is a consumption index, while the new house price index relates to investment, i.e. the acquisition of a certain type of real estate, including land and building. Only a very small percentage of the population invests in a new home each year. The C.P.I. housing component, on the other hand, applies to the cost of housing as experienced by the entire target population. Included in the C.P.I. housing component are such things as household operation, rent, and cost of home ownership.





It is with the C.P.I. home ownership component that the price index for new houses is most often confused. The home ownership component in the C.P.I. represents property taxes, mortgage interest rates, dwelling insurance, owner repairs and depreciation. Prices for the latter two cost elements, i.e. home owner repairs and depreciation cannot be obtained directly and so they are measured on the basis of the cost of residential construction materials and labour. The price index for new houses, on the other hand, being a price index of an investment good, relates to the price of a new subdivision house, including land, building, landscaping, etc. Its current coverage is limited in that it is available for only six metropolitan areas, and, within these, for large volume subdivision housing only, rather than for all types of new residential construction. Together with many other price indexes published by Statistics Canada, these two indexes each serve separate, specific purposes.

Of a more general nature, the index relates to the expenditure basket of households with two to six persons living in urban centres over 30,000 and earning \$4,000 to \$12,000 per year in 1967. The items in the average expenditure basket do not include all expenditures made by households, excluding such items as life insurance, union dues, land and personal taxes.



Because the C.P.I. does not allow for the effect of substitution, it can be argued the C.P.I. tends to exaggerate the impact on families of price inflation. Sudden price increases such as the hike in sugar prices for example, may lead consumers to switch to a substitute or go without. But the C.P.I. continues to give the original weighting to each product.

It should be pointed out the recently published Eleventh Annual Review of the Economic Council of Canada reports on work they have done to explore potential differences in the incidence of price inflation confronted by distinct income classes. From their results they said "it can be inferred that the incidence of inflation is about the same for all families, whatever their income".

Many economists believe that quality changes in goods and services may not be adequately taken into account in the preparation of the C.P.I. As a result, they believe the C.P.I. may have a systematic and persistent upward drift which makes the Index a questionable indicator of the course of inflationary price movements. Recent studies along with the "quality" problem tend to discard this as a serious bias due to inconclusive results.



Statistics Canada spares no effort to assure the dependability of the Consumer Price Index as a measure of price change that is available quickly and frequently. An important consideration to those who use the Index regularly is that it is available on a monthly basis in final unrevised form within some ten days of the month to which it relates. The close to 90,000 monthly price quotes collected across the country permit the publication not only of a national index, but also of fourteen separate regional city indexes from St. John's to Vancouver. Conceptually, it is of the same nature as the C.P.I.'s in most other countries.

It is also alleged at times that the C.P.I. does not reflect the experience of the population living outside the C.P.I. cities, especially of the population in small towns. First, I should note that C.P.I. prices are collected in some thirty-four cities across the country, even though Statistics Canada publishes C.P.I.'s for only fourteen regional cities. Second, while it is undoubtedly true that the level of some consumer prices is higher in small towns or remote areas, due to transportation costs and size of market, it is not necessarily true that the change in the prices of such towns and areas is any different from those recorded at large. The C.P.I.



is designed to measure price changes over time; it cannot be used for making level comparisons among different locations.

The Prices Division of Statistics Canada recognizes the C.P.I. is being used ever more frequently by individuals, and it is one of the principal standards against which the success or failure of Government economic policies are judged. It is clear that with inflation a major economic problem of the day, the stakes involved in an accurate Consumer Price Index are very great. To this end, improvements are always under consideration and work is progressing on, for example, studies of the feasibility of indexes to cover low income groups. Continuing attention is being given to the different consumption patterns of families, as affected by the shifts in retail purchasing from central cities to suburbs, in shopping centres, and from conventional stores to discounters, mail-order houses, etc.

A seasonally adjusted C.P.I. was released for the first time in February 1975 which will have many specialized applications, being primarily of interest to those concerned with analysing current price trends in the economy. There will, of course, continue to be only one Consumer Price Index for Canada, based as before on unadjusted data which measures changes in prices





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actually paid by consumers and which should continue to be extensively used for a wide variety of purposes, including its application in labour contract and transfer payment escalation.

The Prices Division is planning to carry out a study on comparative food prices among three locations in North Central Ontario - Thunder Bay, Sudbury and Sault Ste. Marie - with results becoming available this summer.

For indexing purposes there is no better device than the C.P.I. as long as you know what your objectives are and you understand the Index. To paraphrase Mr. Illing, the Director of the Prices Division, quite often when some dissatisfaction arises from a COLA formula the quality of the C.P.I. is questioned. He suggests the problem might well be with the particular COLA formula that the negotiating parties have adopted.







